BOOK REVIEWS

RECENSIONS DE LIVRES

Control and Manipulation of Animal Growth. P.J. Buttery. N.B. Haynes and D.B. Lindsay. Published by Butterworths, London. 1986. 347 pages. Price $125.00.

This book is the proceedings of the long-established and successful yearly Easter School in Agricultural Science, from the University of Nottingham, England. Over half of the 20 chapters are concerned with the relationship of endogenous and exogenous hormones and growth, and it is somewhat unfortunate that the title does not reflect this topical theme.

The initial chapter deals with the effect of environment on growth, and this refers to numerous dated research with too much emphasis on only one species, namely the pig. The following chapters on the general role of growth promoters and xenobiotics give a good overview, yet again are generally lacking in any new thrusts or ideas. It is unfortunate that these early chapters are less stimulating, since the remaining sections of the book are well worth reading.

Prior to detailing specific hormonal effects on growth, there are a number of chapters describing growth of various tissues of the body followed by an excellent overview of fetal growth. Following an informative account of neurophysiological control of growth and how this will impact on hormonal control, there is an interesting section on so-called epidermal growth factor. The authors point out that a variety of animal diseases result from the breakdown of cell growth regulation and despite their importance, we still have limited knowleged of factors and mechanisms involved in controlling cell proliferation. As an example of such polypeptide mitogens, mode-of-action, role, properties and unifying hypothesis is given for epidermal growth factors.

The remaining bulk of the chapters deal with hormonal control of growth, with specific sections on growth hormone, prostaglandins, insulin, glucocorticoids, ß-adrenergic agonists, and various hormone-releasing factors. These chapters are somewhat diverse in approach, some dealing with only biochemical parameters, and others describing animal function and performance. In general the reader is given a good overview, and current literature is cited for further reading. In terms of endogenous hormone manipulation, the reader is provided with some thoughts of future direction in terms of recombinant gene transfer. As anticipated, much of the discussion at this time is limited to small mammals.

Obviously, no book on this controversial topic would be complete without some discussion on safety aspects. There is good discussion on aspects of meat residue and difficulties involved in assay procedures.

Overall the book is well written and the reader is presented with a wealth of information and cited research data. As with any book that is the proceedings of a conference, its major weakness is lack of flow and consistency from chapter to chapter. However, anyone wanting specific specialized information will not find this a problem and will be aided by an excellent indexing system.

Steven Leeson
Professor, Animal Nutrition
Department of Animal and Poultry Science
University of Guelph
Guelph, Ontario, Canada N1G 2W1

Nutrient Requirements of Poultry and Nutritional Research. C. Fisher and K.M. Boorman. Published by Butterworths, London. 1986. 224 pages. Price $84.95.

This book records the proceedings of the 19th Poultry Science Symposium held in Edinburgh in 1984. Readers familiar with this very succesful series are again presented with a change in format, and after the 1985 volume appears, future plans are for only biennial meetings and proceedings.

The opening and final chapters of the proceedings deal with nutrition research past and future, and are of such a general nature as to seem out of place in relation to the other technical papers. The remaining chapters seem to be arranged in no particular order and the reader is continually transferred back and forth from theoretical aspects of modeling nutrient requirements, to more classical growth response data.

If a general them can be given for the book, it would be on modelling of the bird's response to various nutrient inputs. It is likely that the book will appeal mainly to nutritionists, and in this respect they may well have to consult with a mathematician to decipher many of the equations presented. A basic limitation of modelling approaches is assumption of association and response between various inputs and outputs. In many instances, the reader is confronted with far too many axiom and definition equations that are in large part supposition; unfortunately, they seem to be presented as absolute fact. There are more classical chapters involved with amino acid, energy, and vitamin-mineral requirements of birds, although in large part, they provide little new information and the cited data are somewhat dated. In many of these chapters, there are differing views on basic methods of interpreting data, and it is unfortunate that these follow chapters specifically on this subject.

It is difficult to maintain the standard of excellence set by this series of symposium proceedings, and this is perhaps why we will see biennial volumes in future years. The volume is not up to the standard of

past years, and the reader gains little new knowledge on the nutrient requirements of poultry. With such a dynamic and fast-moving industry, it is unfortunate that much of the cited material is dated, and that in fact the book took two years to appear in print.

Steven Leeson
Professor, Animal Nutrition
Department of Animal and Poultry Science
University of Guelph
Guelph, Ontario, Canada N1G 2W1

The State of the Ark: An Atlas of Conservation. Lee Durrell (with research by the International Union for Conservation of Nature and Natural Resources). Published by Doubleday and Company. 224 pages. Price $21.95 (softcover).

A dominant image of our time is of planet Earth seen from the moon, a tiny sphere floating silently in the galactic space, apparently unique in a Universe of millions of galaxies. Three billion years of evolution have endowed our world with an inconceivable diversity of life forms together with, according to the Gaia hypothesis, a remarkable self-regulating ecological system. Human population growth has led, at an exponentially increasing rate, to massive destruction of natural environments which have taken so long to develop. Half the world's tropical rain forests have disappeared since the second world war. The loss of animal species through the destruction of their habitat has paralleled the rise in human population. Between now and the year 2000, ten percent of animal and plant species may disappear, with half unmourned because they have not even been described. What unknown wonders did they contain?

The greatest diversity of all life forms are in the tropical-southern regions, the areas with the greatest human poverty but the highest population growth. It is in these areas that the natural environment is being most rapidly and apparently uncontrollably degraded. In 100 years time, at current growth rates, North America's human population will have increased by only 100 million, a trivial amount compared to the increase of one billion in Latin America, two billion in Africa, and four billion in South-east Asia. The self-sustaining mechanisms by which current life-forms on earth are supported may not survive the demand on resources. The loss of plant, insect, bird, fish, and mammalian species will be staggering.

This beautifully produced, well-researched, and well-written book will fire the imagination of those who want our children and grandchildren to see something of the living treasury which we have inherited. It is an ideal sourcebook for anyone interested in conservation. The five sections of the book assesses the current state of the "ark", of the wild, of the species, of the regions and of "Noah's army". The latter describes some of the many emerging groups dedicated to the conservation of the planet, from large organizations such as the World Wildlife Fund and Greenpeace to individual efforts such as those of Canada's Kay and Larry McKeever and the Owl Rehabilitation Research Foundation. "Green" politics are now influential in Europe but the tremendous interest in conservation is universal. Canada comes out moderately well in terms of national support for international agreements on preservation of wetlands, on preventing the trade in endangered species, and over acid rain. The front lines in this fight are not however in North America.

This book is highly recommended to all interested in conservation. It has many inspiring examples of practical, local efforts. Sadly, the veterinary profession, concerned with the health of all animal species other than humans, gets no mention. Is there really no institutional interest in this critical issue? Conservation is surely an important area for contributions of veterinary skills. Veterinarians considering how they might become involved will find this an excellent introduction.

John F. Prescott
Department of Veterinary Microbiology and Immunology
Ontario Veterinary College
University of Guelph
Guelph, Ontario N1G 2W1

Veterinary Neurology. J.E. Oliver, B.F. Horlein and J.C. Mauhew. Published by W.B. Saunders, Toronto. 1987. 554 pages. Price $111.00.

The goal of the authors of Veterinary Neurology is to provide a comprehensive reference and textbook of neurology that includes both farm and small animals. Although the foundations of this new text lie in B.F. Horlein's third edition of Canine Neurology, this is a new book presenting the latest advances in veterinary clinical neurology. The expert contributions from 15 additional authors enhance its depth and accuracy of information.

The resemblance to Horlein's original text is seen in the chapters on disc disease and neurosurgical techniques applicable to small animals. The first part of the book includes the basic neurological examination techniques and neurodiagnostic procedures which are explained and illustrated in detail with many recent references. The neuroradiography section is excellent, both in content and radiographic reproductions. The electrodiagnostic chapters provide an excellent synopsis of the considerable research and practical information that has been accumulating over the last ten years.

The section on specific diseases is an important addition to the textbooks presently available. Although the coverage of farm animal neurology is not comprehensive, the authors have highlighted and provided references on many of the more recently identified or researched neurological diseases of farm animals. Large animal diseases are interspersed with small animal diseases classified according to the nature of the disease process (i.e. degenerative, anomalies, inflammation, etc.). Thus specific diseases are located most easily by consulting the index.

This book will provide an up-to-date reference book on all aspects of clinical neurology. The emphasis is very clinical and thus neuroanatomic details are minimal. For the person interested in basic clinical neurology, lesion location, or the problem-oriented approach to neurological diseases, there are more